

AMENDMENTS TO THE CLAIMS

The following listing of claims will replace all prior versions and listings of claims in the application.

LISTING OF CLAIMS

1-13. (canceled)

14. (currently amended) ~~The luminescent glass of claim 1 comprising~~ A luminescent phosphate phosphor glass doped with at least one trivalent rare earth cations in an amount exceeding 1 mol-% on an oxide basis, the glass comprising P_2O_5 , Al_2O_3 , and 0 to 50 mol-% of at least one component selected from the group formed by alkali earth oxides, alkaline earth oxides and ZnO, and further comprising up to 4 wt.-% of at least one component selected from the group formed by SiO_2 , ZrO_2 , As_2O_3 , Sb_2O_3 , TiO_2 , and Nb_2O_5 , said glass having color chromaticity coordinates, x and y, and color temperature, CT, near the Plankian curve between 2700K and 7000K, expressed as a ΔC value of less than or equal to 0.011, and a color rendering index > 80 , wherein the trivalent rare earth cations ~~[[of]]~~ comprise Tb, Eu, and Tm.

15. (currently amended) The luminescent glass of claim ~~[[1]]~~ 14 comprising trivalent rare earth cations of Tb, Eu, Tm, and Ce.

16. (currently amended) ~~The luminescent glass of claim 1 comprising~~ A luminescent phosphate phosphor glass doped with at least one trivalent rare earth cations in an amount exceeding 1 mol-% on an oxide basis, the glass comprising P_2O_5 , Al_2O_3 , and 0 to 50 mol-% of at least one component selected from the group formed by alkali earth oxides, alkaline earth oxides and ZnO, and further comprising up to 4 wt.-% of at least one component selected from the group formed by SiO_2 , ZrO_2 , As_2O_3 , Sb_2O_3 , TiO_2 , and Nb_2O_5 , said glass having color chromaticity coordinates, x and y, and color temperature, CT, near the Plankian

curve between 2700K and 7000K, expressed as a ΔC value of less than or equal to 0.011, and a color rendering index > 80 , wherein the trivalent rare earth cations comprise Pr and Dy.

17. (currently amended) ~~The luminescent glass of claim 1 comprising~~ A luminescent phosphate phosphor glass doped with at least one trivalent rare earth cations in an amount exceeding 1 mol-% on an oxide basis, the glass comprising P_2O_5 , Al_2O_3 , and 0 to 50 mol-% of at least one component selected from the group formed by alkali earth oxides, alkaline earth oxides and ZnO, and further comprising up to 4 wt.-% of at least one component selected from the group formed by SiO_2 , ZrO_2 , As_2O_3 , Sb_2O_3 , TiO_2 , and Nb_2O_5 , said glass having color chromaticity coordinates, x and y, and color temperature, CT, near the Plankian curve between 2700K and 7000K, expressed as a ΔC value of less than or equal to 0.011, and a color rendering index > 80 , wherein the trivalent rare earth cations comprise Pr, Dy, Tb, Eu, Tm, and Ce.

18-22. (canceled)

23. (currently amended) [[A]] The luminescent glass of claim 14, comprising wherein said luminescent glass comprises a base glass doped with 0.001 to 30 wt.-% of rare earth oxides on an oxide basis, said base glass comprising 1 wt.-% of water at the most, and further comprising 1 wt.-% of B_2O_3 at the most.

24. (original) The luminescent glass of claim 23, wherein said base glass is a glass selected from the group of glasses formed by an alkaline-earth silicate glass, a lead-silicate glass (flint glass), a soda-lime glass (crown glass), an alkali-alkaline-earth silicate glass, a lanthanum oxide borate glass, a barium oxide silicate glass, a chalcogenide glass and a halide glass.

25. (original) The luminescent glass of claim 23, wherein said base glass comprises at least one oxide of a metal selected from the group formed by heavy metals and transition metals.

26. (currently amended) The luminescent glass of claim 23, wherein said base glass comprises at least one oxide of a metal selected from the group formed by Bi, Te, Sb, Ge, Gd, Ga, Pb, V, and Nb.

27. (original) The luminescent glass of claim 23, wherein said base glass comprises (in wt.-%):

| | |
|--------------------------------|-----------|
| P ₂ O ₅ | >7 |
| MgO + CaO + SrO | >1 |
| Al ₂ O ₃ | >5 |
| BaO | >5 |
| R ₂ O | >0.1 |
| F/F ₂ | >10 |
| SiO ₂ | ≥0 |
| other oxides | up to 20, |

wherein R₂O is an alkali oxide.

28. (original) The luminescent glass of claim 23, wherein said base glass comprises 0.1 wt.-% of water at the most.

29. (original) The luminescent glass of claim 28, wherein said base glass, apart from any unintended contaminants, is free of nitrides.

30. (original) A luminescent glass comprising 0.001 to 30 wt.-% of rare earth oxides on an oxide basis, said luminescent glass comprising at least partially segregated glass regions comprising rare earth ions.

31. (currently amended) The luminescent glass of claim 30, wherein at least 30% of said rare earth oxides are contained within said segregated glass regions.

32. (currently amended) The luminescent glass of claim 30, wherein at least 50% of said rare earth oxides are contained within said segregated glass regions.

33. (currently amended) The luminescent glass of claim 30, wherein said glass comprising comprises 0.1 wt.% of water at the most.

34. (original) A luminescent glass comprising 0.001 to 30 wt.-% of rare earth oxides on an oxide basis, said luminescent glass being partially crystallized having crystalline regions, said crystalline regions comprising at least some of said rare earth oxides contained within said glass.

35. (currently amended) ~~[[The]]~~ A luminescent glass of claim 34 comprising 0.001 to 30 wt.-% of rare earth oxides on an oxide basis, said luminescent glass being partially crystallized having crystalline regions, said crystalline regions comprising at least some of said rare earth oxides contained within said glass, wherein at least 30% of said rare earth oxides are contained within said crystalline glass regions.

36. (currently amended) The luminescent glass of claim 34, wherein at least 50% of said rare earth oxides are contained within said crystalline glass regions.

37-44. (canceled)

45. (new) The luminescent glass of claim 14, wherein said glass comprises at least 3 mol-% of Al_2O_3 .

46. (new) The luminescent glass of claim 14, wherein said glass comprises at least 50 mol-% of P_2O_5 .

47. (new) The luminescent glass of claim 14, wherein said glass comprises at least 3 to 15 mol-% of Al_2O_3 and at least 50 to 75 mol-% of P_2O_5 .

48. (new) The luminescent glass of claim 14, wherein said glass comprises 0.5 to 35 mol-% of at least one alkali metal oxide.

49. (new) The luminescent glass of claim 47, wherein said glass comprises 0.5 to 35 mol-% of at least one alkali metal oxide.

50. (new) The luminescent glass of claim 14, wherein up to 90% of the oxygen contained within the glass is replaced by fluorine.

51. (new) The luminescent glass of claim 14, wherein up to 10% of the oxygen contained within the glass is replaced by at least one anion different from oxygen.

52. (new) The luminescent glass of claim 51, wherein up to 10% of the oxygen contained within the glass is replaced by at least one anion selected from the group formed by nitrogen, carbon and halides.

53. (new) The luminescent glass of claim 14, wherein said glass comprises more than 2 mol-% RE_2O_3 , where RE_2O_3 refers to more than one trivalent rare earth oxide selected from the group formed by La_2O_3 ,

Ce_2O_3 , Pr_2O_3 , Nd_2O_3 , Sm_2O_3 , Eu_2O_3 , Gd_2O_3 , Tb_2O_3 , Dy_2O_3 , Ho_2O_3 , Er_2O_3 , Tm_2O_3 , and Yb_2O_3 .

54. (new) The luminescent glass of claim 14, wherein said glass comprises more than 3 mol-% RE_2O_3 , where RE_2O_3 refers to more than one trivalent rare earth oxide selected from the group formed by La_2O_3 , Ce_2O_3 , Pr_2O_3 , Nd_2O_3 , Sm_2O_3 , Eu_2O_3 , Gd_2O_3 , Tb_2O_3 , Dy_2O_3 , Ho_2O_3 , Er_2O_3 , Tm_2O_3 , and Yb_2O_3 .

55. (new) The luminescent glass of claim 14, wherein said glass comprises more than 4 mol-% RE_2O_3 , where RE_2O_3 refers to more than trivalent one rare earth oxide selected from the group formed by La_2O_3 , Ce_2O_3 , Pr_2O_3 , Nd_2O_3 , Sm_2O_3 , Eu_2O_3 , Gd_2O_3 , Tb_2O_3 , Dy_2O_3 , Ho_2O_3 , Er_2O_3 , Tm_2O_3 , and Yb_2O_3 .